

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



10/542378



(43) International Publication Date  
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number  
WO 2004/064101 A1

(51) International Patent Classification<sup>7</sup>: H01J 1/30

(21) International Application Number:  
PCT/KR2003/002851

(22) International Filing Date:  
26 December 2003 (26.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2003-0002716 15 January 2003 (15.01.2003) KR

(71) Applicant (for all designated States except US):  
POSTECH FOUNDATION [KR/KR]; San 31, Hy-  
oja-dong, Nam-gu, 790-784 Pohang-city, Kyungsang-  
buk-do (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LEE, Kun-Hong  
[KR/KR]; Dept. of Chemical Engineering, Pohang Uni-  
versity of Science and Technology, San 31 Hyoja-dong,

Nam-gu, 790-784 Pohang-city, Kyungsangbuk-do (KR).  
HWANG, Sun-Kyu [KR/KR]; Dept. of Chemical Engi-  
neering, Pohang University of Science and Technology,  
San 31 Hyoja-dong, Nam-gu, 790-784 Pohang-city,  
Kyungsangbuk-do (KR). LEE, Ok-Joo [KR/KR]; Dept.  
of Chemical Engineering, Pohang University of Science  
and Technology, San 31 Hyoja-dong, Nam-gu, 790-784  
Pohang-city, Kyungsangbuk-do (KR).

(74) Agent: LEE, Young-Pil; The Chunghwa Building,  
1571-18 Seocho-dong, Seocho-gu, 137-874 Seoul (KR).

(81) Designated States (national): CN, JP, US.

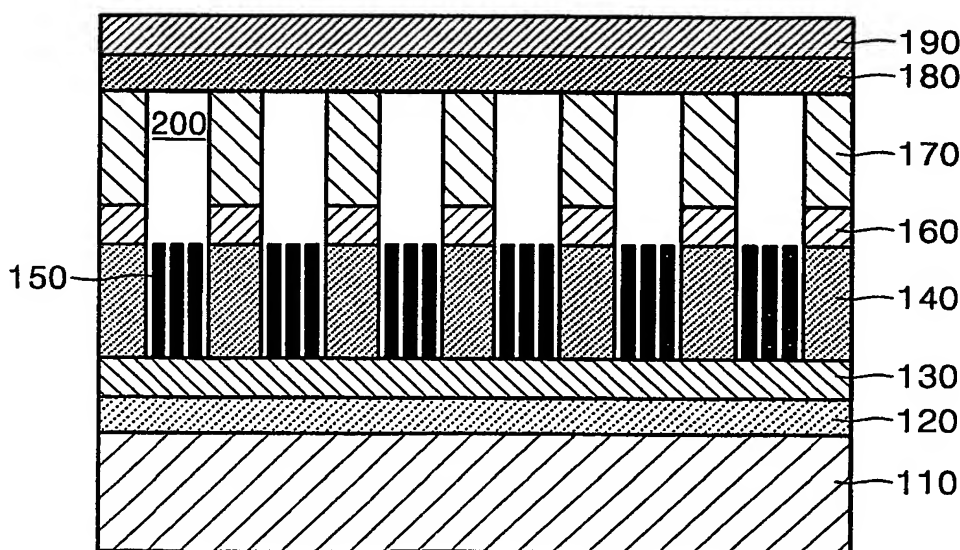
(84) Designated States (regional): European patent (AT, BE,  
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: FIELD EMISSION DISPLAY WITH INTEGRATED TRIODE STRUCTURE AND METHOD FOR MANUFACTURING THE SAME



(57) Abstract: A field emission display (FED) with an integrated triode structure is provided. The FED can be manufactured without using a complex packaging process and have a significantly reduced well diameter and a significantly reduced cathode-to-anode distance. In the FED, front and rear panels form a single body using an anode insulating layer as an intermediate. A method for manufacturing the FED using anodic oxidation is also provided.

WO 2004/064101 A1